Isle of Man Government

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COVID-19 Weekly Surveillance Report

16th December 2021

Public Health Directorate

Introduction

- This report is a summary of indicators which are used to understand the dynamics of the spread of COVID-19 on the Isle of Man.
- This report will be published each Thursday for data up to and including the previous Sunday e.g. 12th August is for data up to 8th August.
- Time periods, unless otherwise specified, will start from the 28th June which is taken to be the beginning of this current wave.
- Confirmed cases are where a PCR test has returned a positive result.
- The report has been compiled by the Public Health Intelligence Team using data from Manx Care and the Civil Registry.

Wave Surveillance

- Currently the indicators suggest that the Isle of Man is seeing a levelling off and possible fall in the third wave of widespread community transmission. This wave has been driven almost entirely by transmission of the delta variant.
- We now have the omicron variant present on Island and it is rapidly becoming the dominant strain across the UK. Due to the concerns regarding the ability of this variant to evade vaccine and infection induced immunity, we expect to see a fourth wave driven by omicron developing over the rest of this year and into next. It is not yet possible to model the impact of this or its implications for demand on NHS services with any accuracy at this stage.
- Following border relaxation, rates on island and patterns of incidence have, as expected, aligned with the pattern seen in the UK and this is clearly shown in the maps in this week's report.
- Cases have fallen this week, with a fall in or levelling of cases across all age groups.

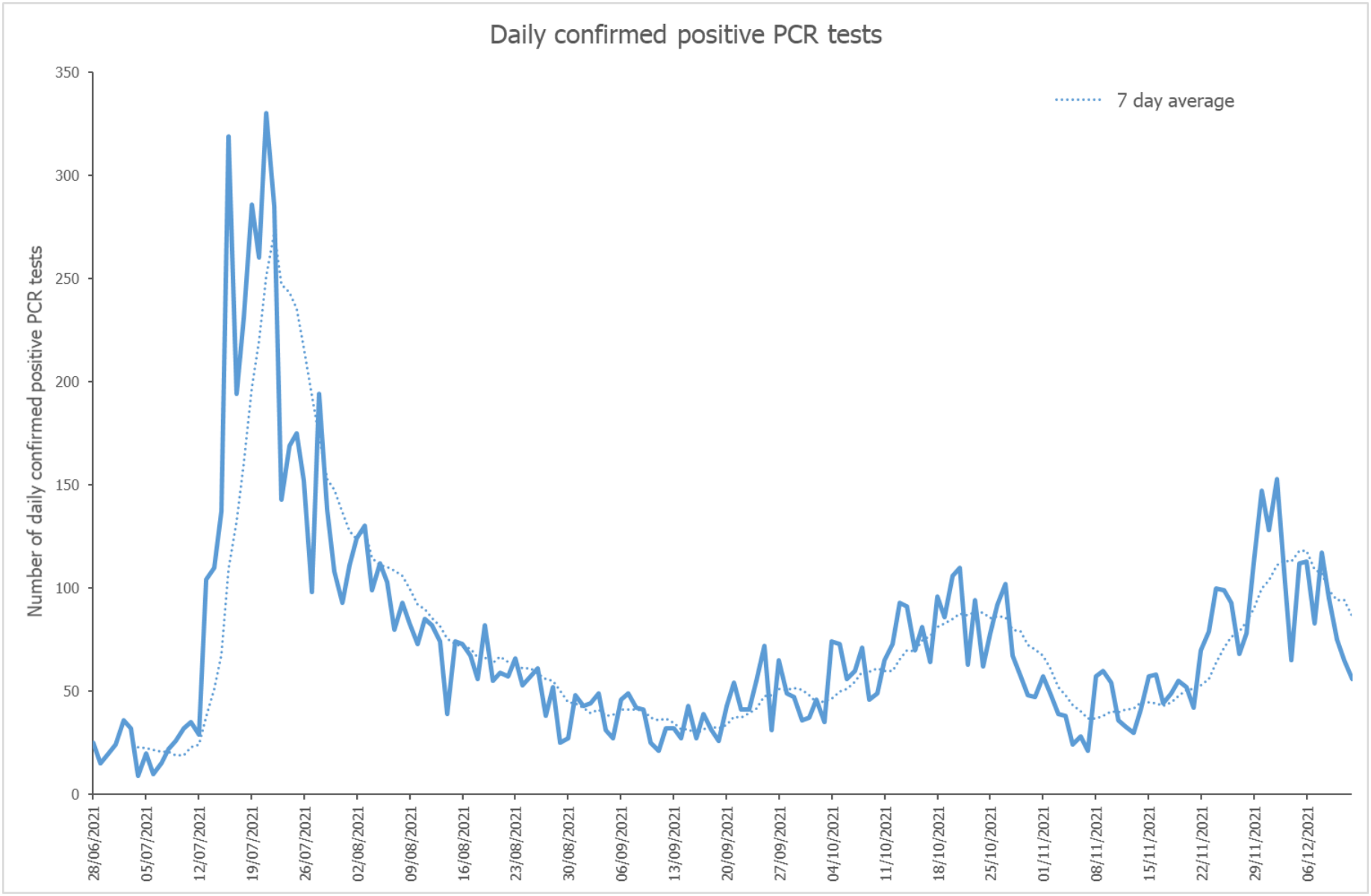
Wave Surveillance

- In response to concerns regarding the omicron variant, from 30th November, arrivals testing requirements have changed as follows: travellers from elsewhere in the CTA (and no history of travel outside the CTA in preceding 10 days) are now required to undertake a LFD test within twelve hours of arrival and report the result on the government website. Those testing positive on LFD are required to have a PCR test. Travellers who have been outside the CTA in the preceding 10 days are required to undertake a PCR test. Results from these test pathways will be included in future reports.

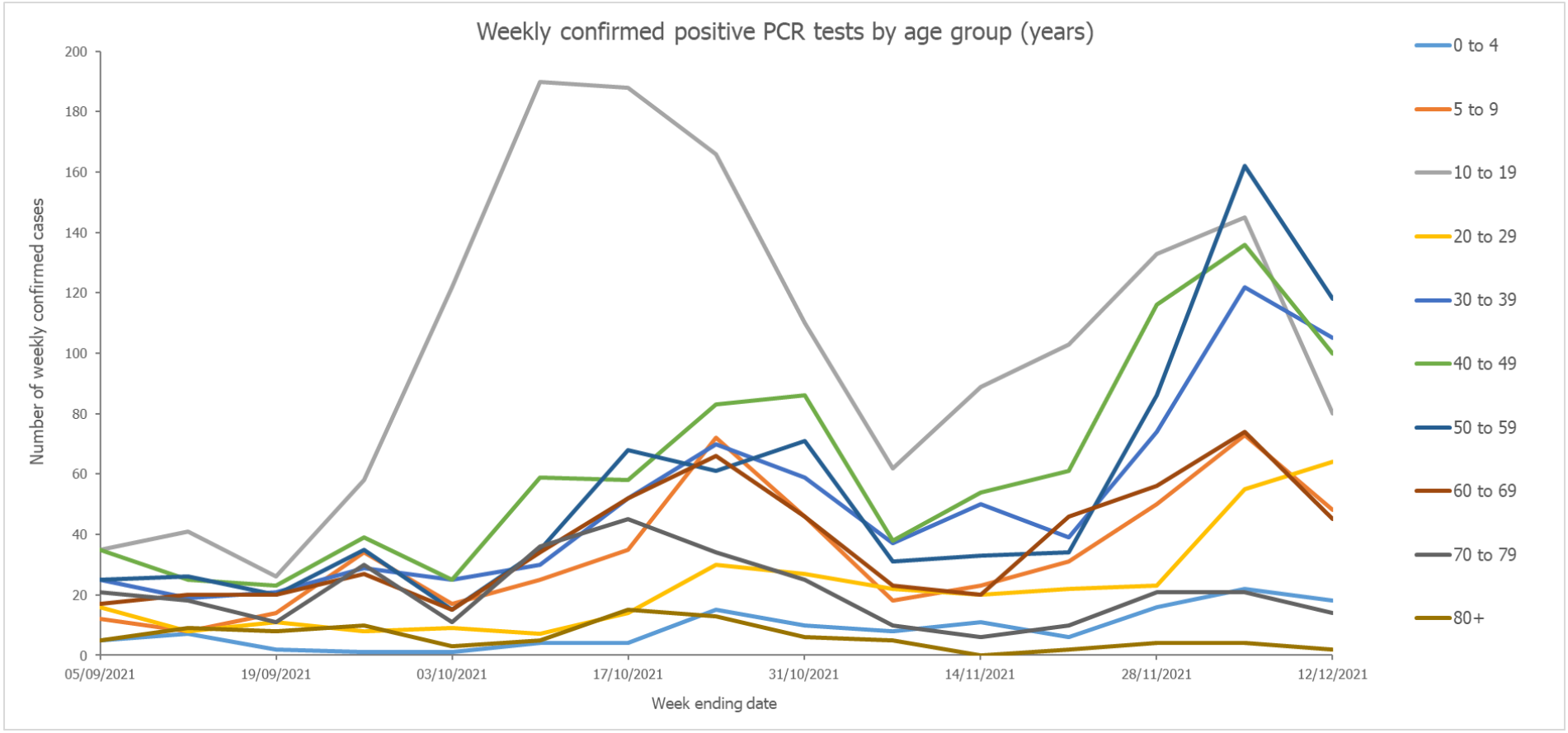
Key Points

- The current 7-day average for confirmed positive cases is around 86.
- The current overall trend of confirmed cases is slightly decreasing.
- Most recent 7-day daily average test positivity rate is 27.9%.
- The percentage of PCR tests from the LFD pathway is slightly decreasing, with percentage of UK Arrival tests remaining level over the last two weeks.
- 89% of positive PCR tests are from the LFD pathway.
- The effective reproduction number (R_t) was 0.77 this week. This is a fall from last week's value of 1.66 and confirms the current decrease in rate of spread.
- The snapshot census of the Hospital shows 6 patients currently admitted with a COVID positive status.
- Daily and Weekly deaths continue to show a level trend overall.

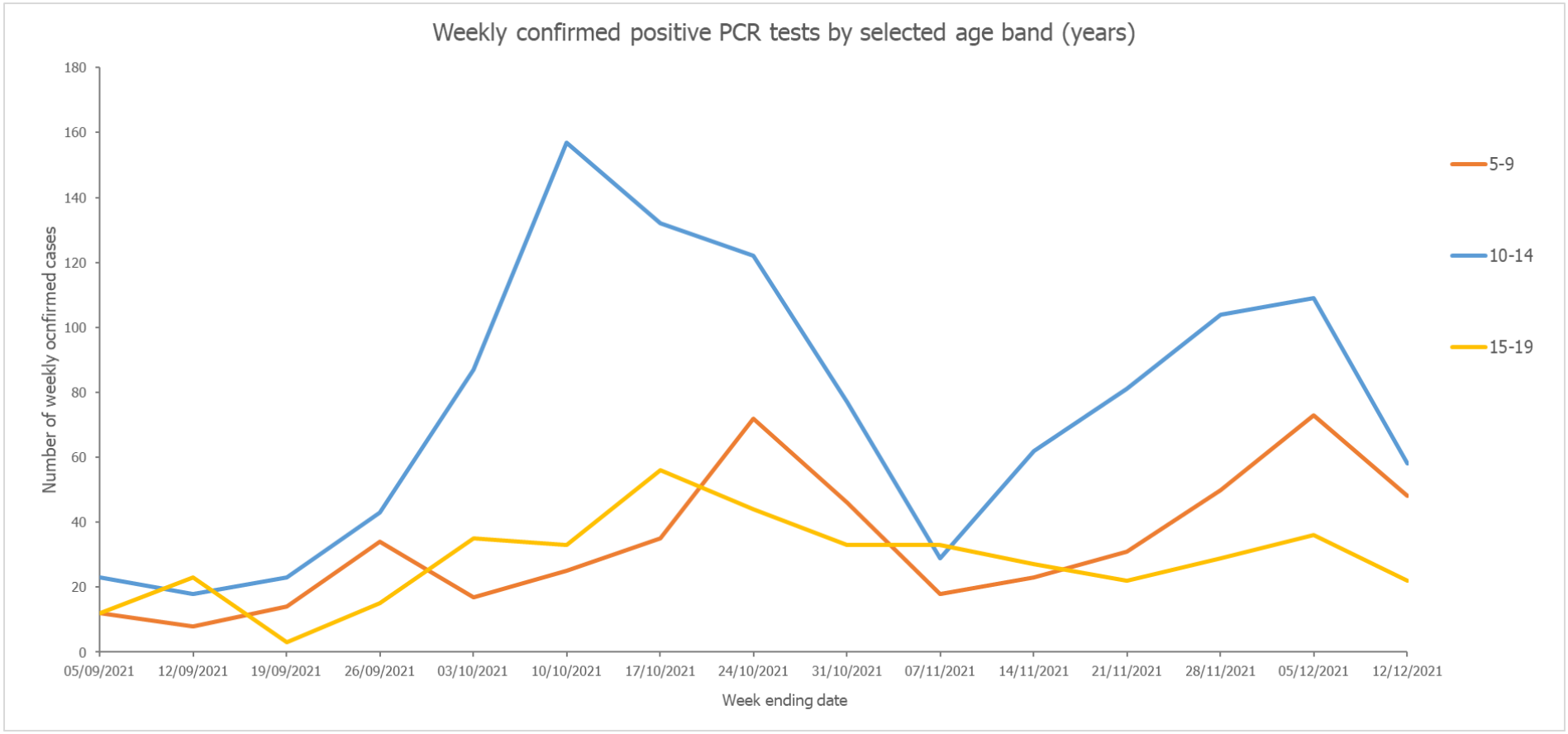
Daily Positive Cases Update – Current Wave



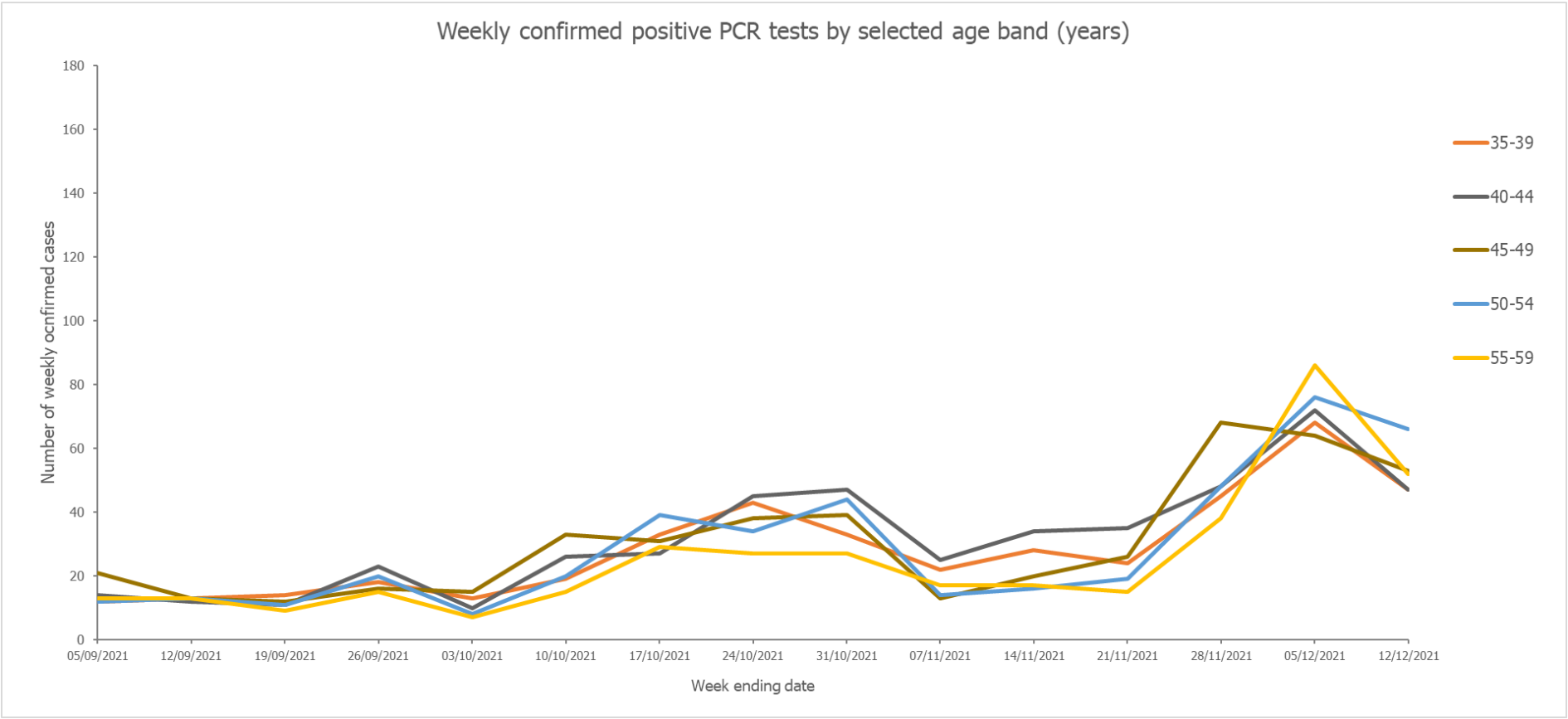
Age Group Analysis



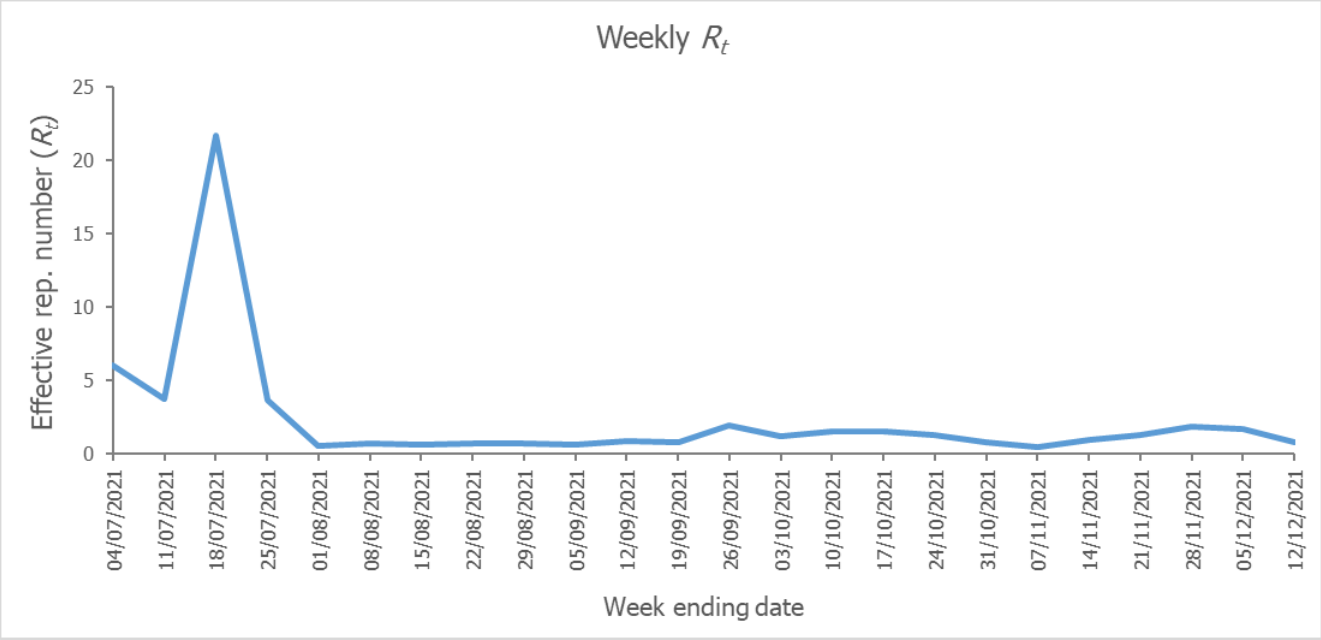
Selected Age Group Analysis



Selected Age Group Analysis



Effective Reproduction Number (R_t)



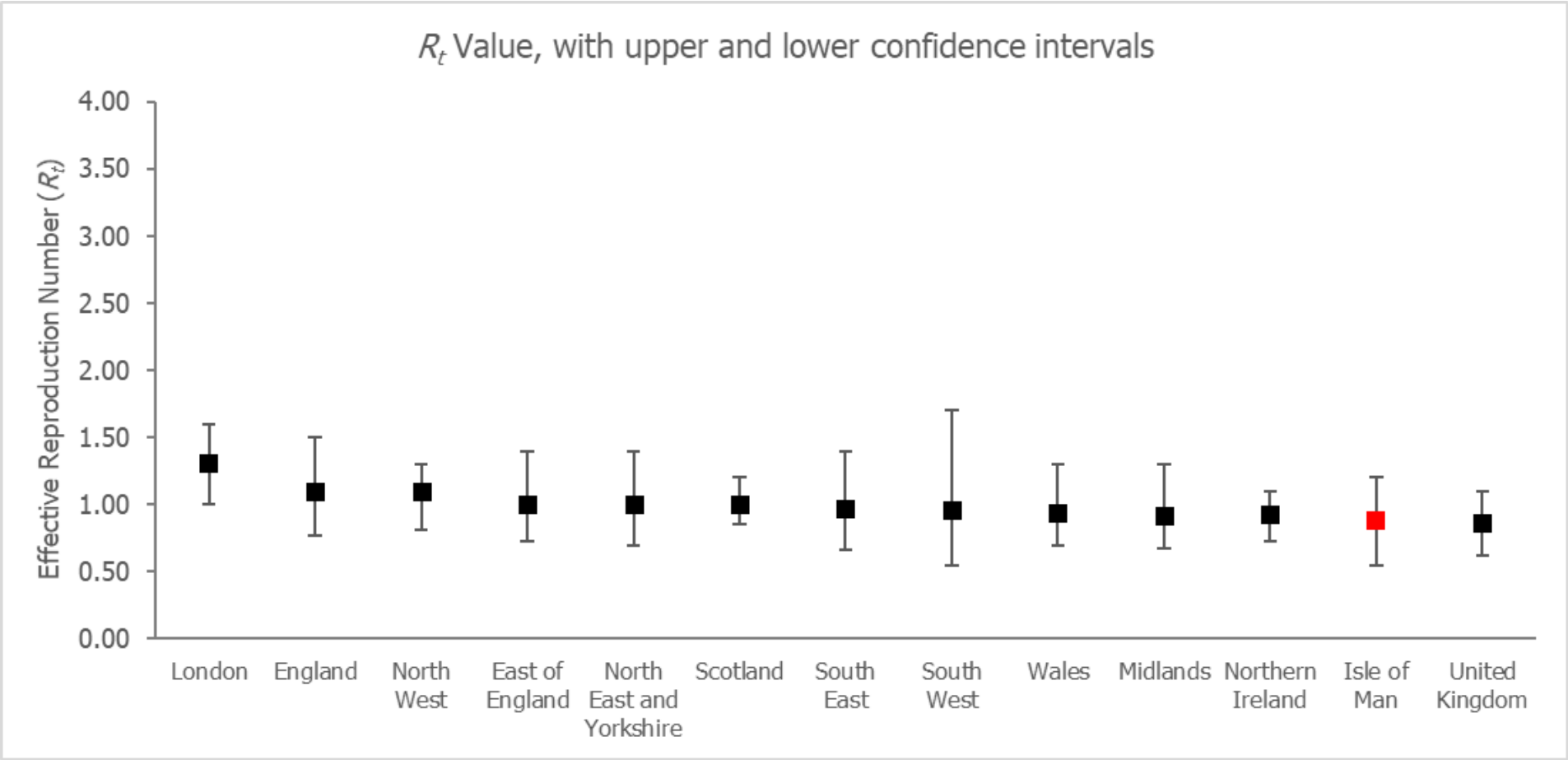
Latest 7 day
$R_t = 0.77$

- The Effective Reproduction Number (R_t) represents the number of secondary infections generated by each case over time 't' (over a week as presented here) and can be dramatically modified by applying effective interventions.
- When $R_t > 1$ there are more new infections than recoveries, thus the number of infected individuals in the population is increasing, while for $R_t < 1$ the number of infected individuals must be decreasing for the opposite reason.
- The calculation of R_t is as follows[1]:

$$R_t\,(t_i) = \frac{\text{New Infections}}{\text{New Recoveries} + \text{New Deaths}}$$

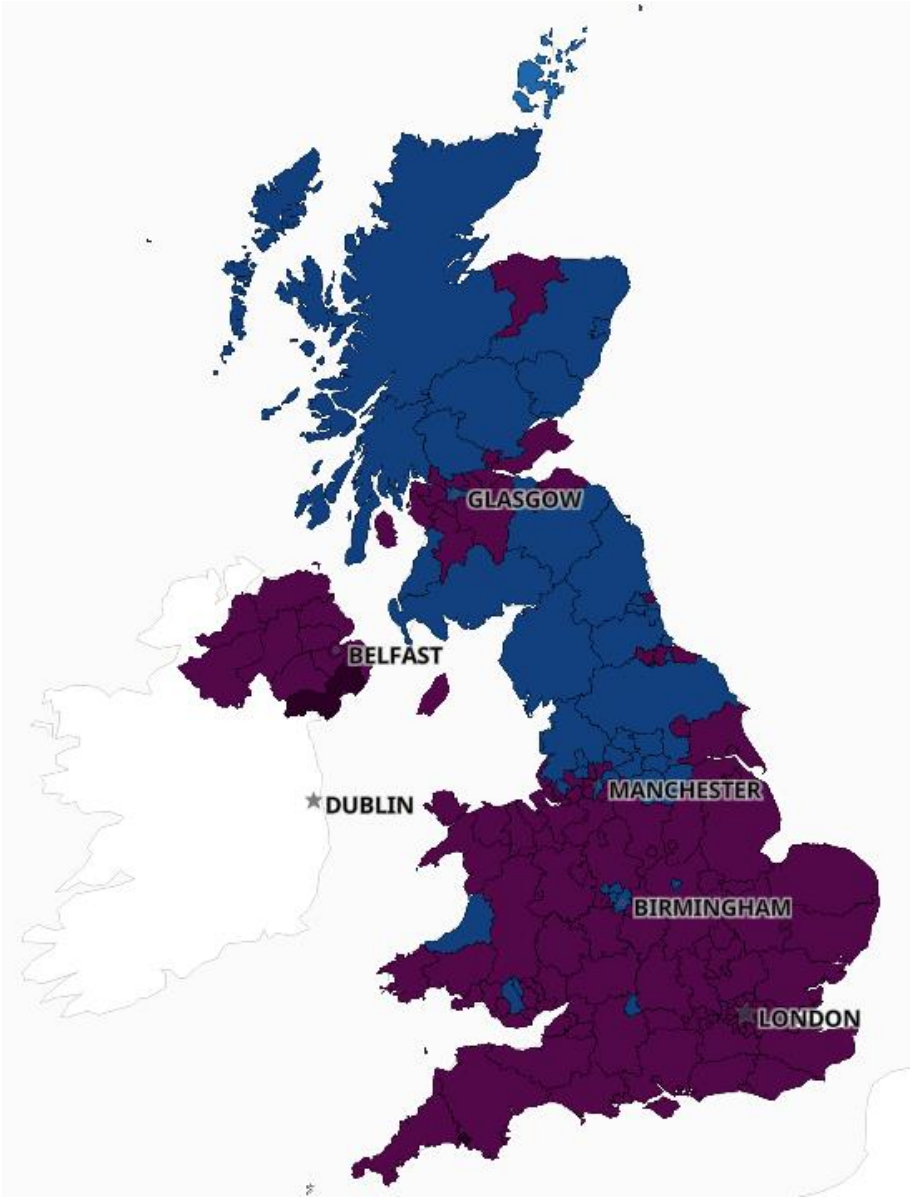
- The UK uses a more complex method of estimating R_t which we are not able to replicate here. The use of this simplified methodology limits the robustness of comparing our R_t value with UK estimates, however it provides a useful comparison between different time periods on Island. New Recoveries is calculated using the presumed 10 day recovery period from positive PCR test result.
- A full table of daily R_t values for the current wave is available in Appendix 1.

R_t Area Comparison

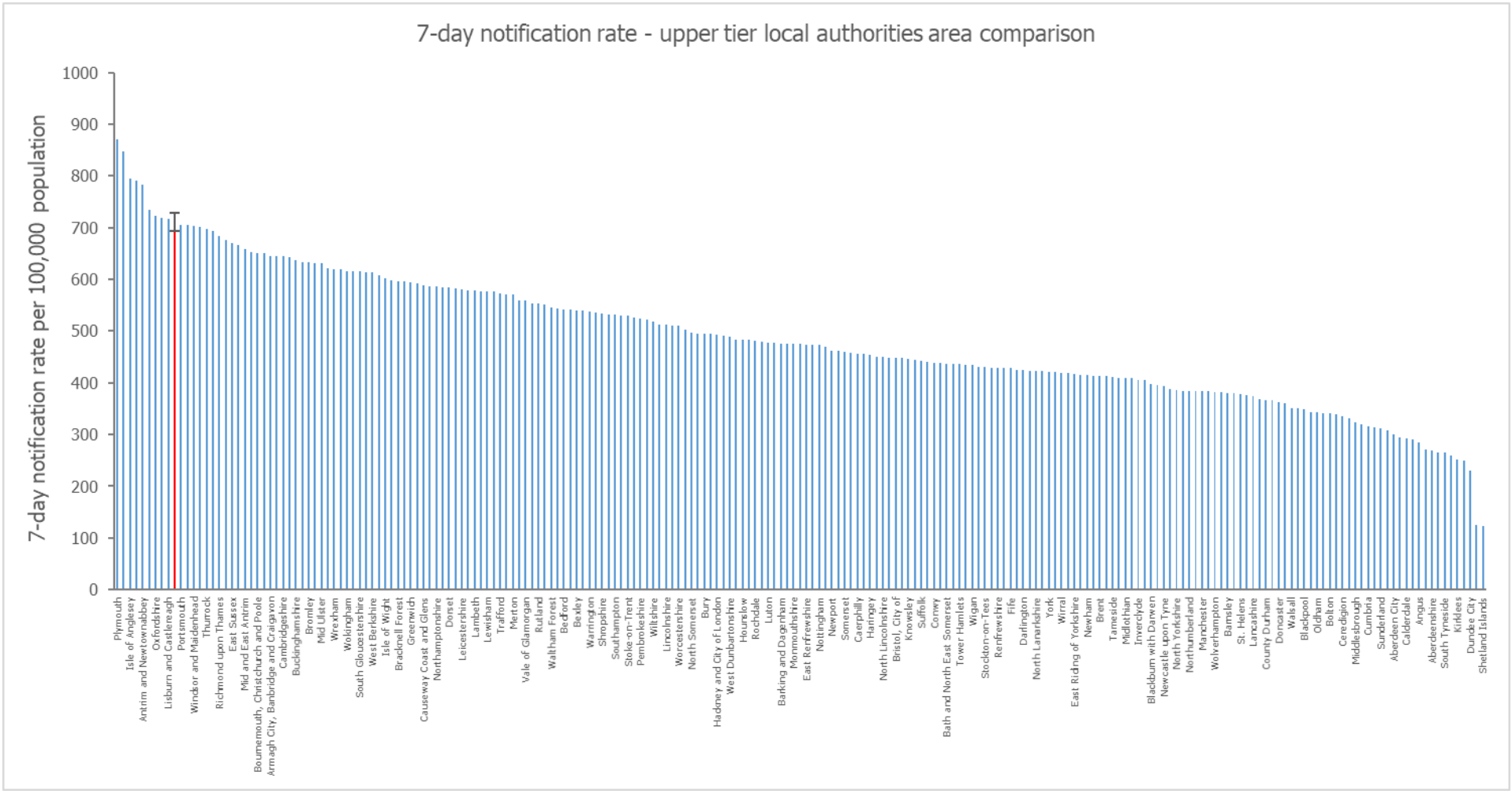


- R_t value shown for Isle of Man is R_t for 12/12/2021
- R_t values shown for United Kingdom areas are 7 day R_t values for 08/12/2021 (latest figures)

7-day Notification Rate Area Comparison

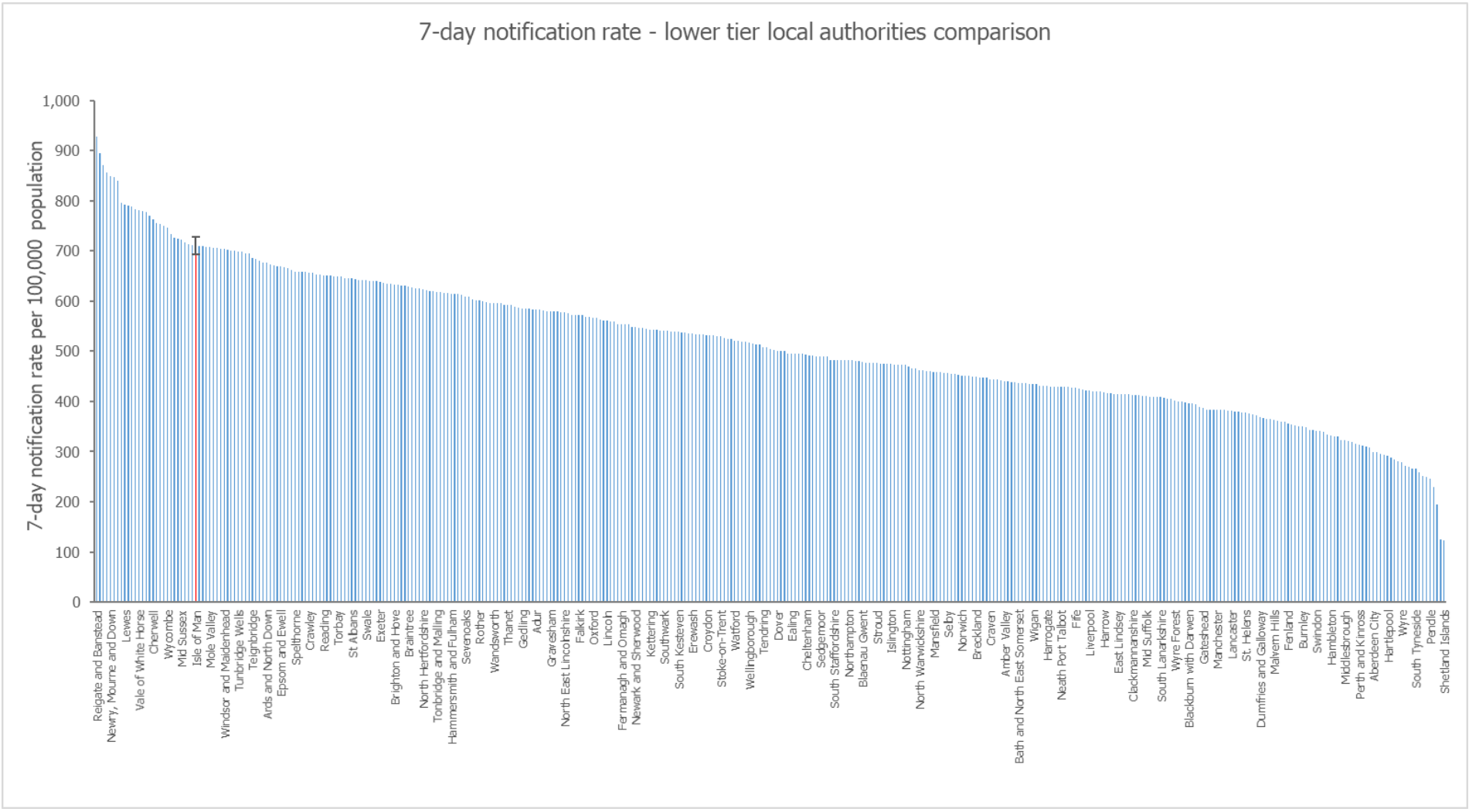


7-day Notification Rate – Upper Tier LA Comparison



- The Isle of Man (shown in red), has the 10th highest 7-day notification rate per 100,000 population when included in the upper tier local authorities of the UK.

7-day Notification Rate – Lower Tier LA Comparison



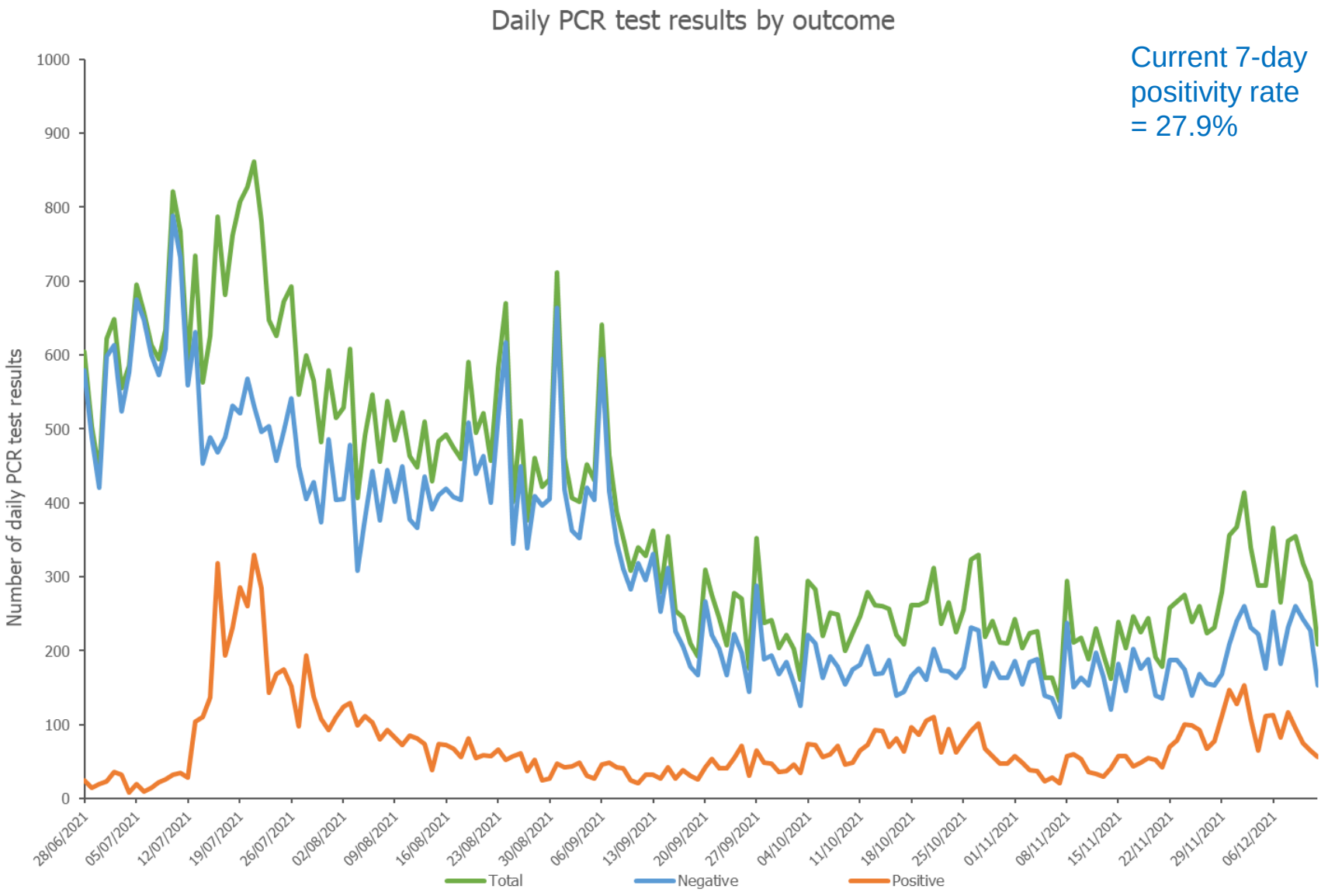
- The Isle of Man (shown in red), has the 29th highest 7-day notification rate per 100,000 population when included in the lower tier local authorities of the UK.

14-day Notification Rate Comparison

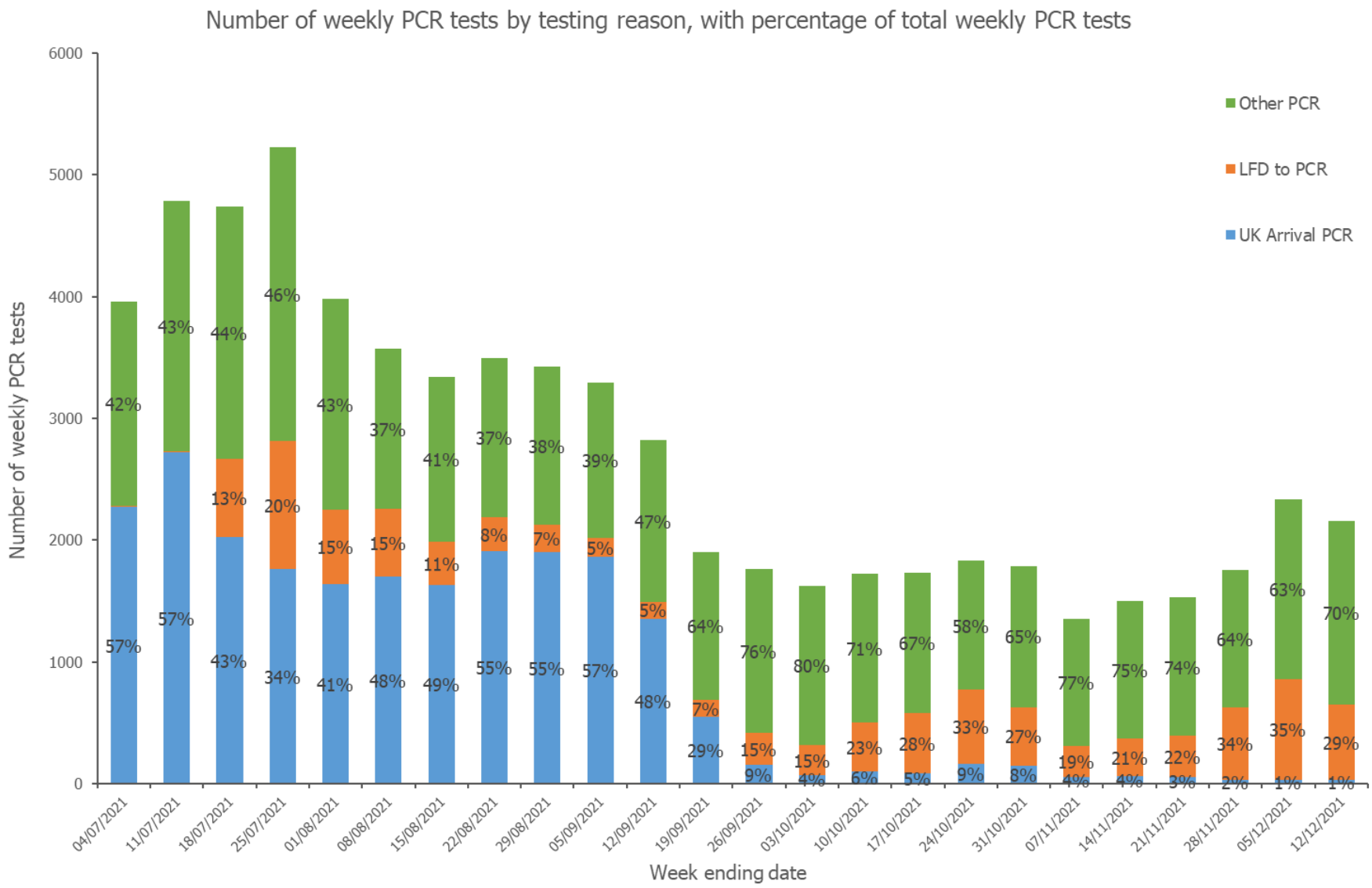
	Isle of Man			United Kingdom
Week number	14 day rate	Lower CI	Upper CI	14 day rate
36	617.41	612.23	622.60	727.08
37	565.67	561.04	570.30	663.56
38	660.93	654.07	667.78	643.48
39	766.77	760.65	772.89	691.94
40	874.96	867.84	882.08	778.05
41	1136.04	1128.80	1143.29	805.89
42	1357.14	1348.52	1365.75	852.05
43	1303.04	1291.68	1314.39	936.14
44	878.49	865.69	891.29	776.13
45	666.81	660.02	673.60	697.62
46	785.59	780.35	790.83	798.68
47	1110.17	1099.81	1120.53	860.74
48	1660.55	1645.83	1675.27	909.34
49	1680.54	1664.71	1696.38	-

- The 14-day rate is calculated by totalling new confirmed cases over the past 14-day period, dividing this number by the total population, and then multiplying by 100,000 to enable area comparisons.
- Since the week ending 10/10/21, the Isle of Man has had significantly higher 14 day notification rates than the UK

PCR Testing Update

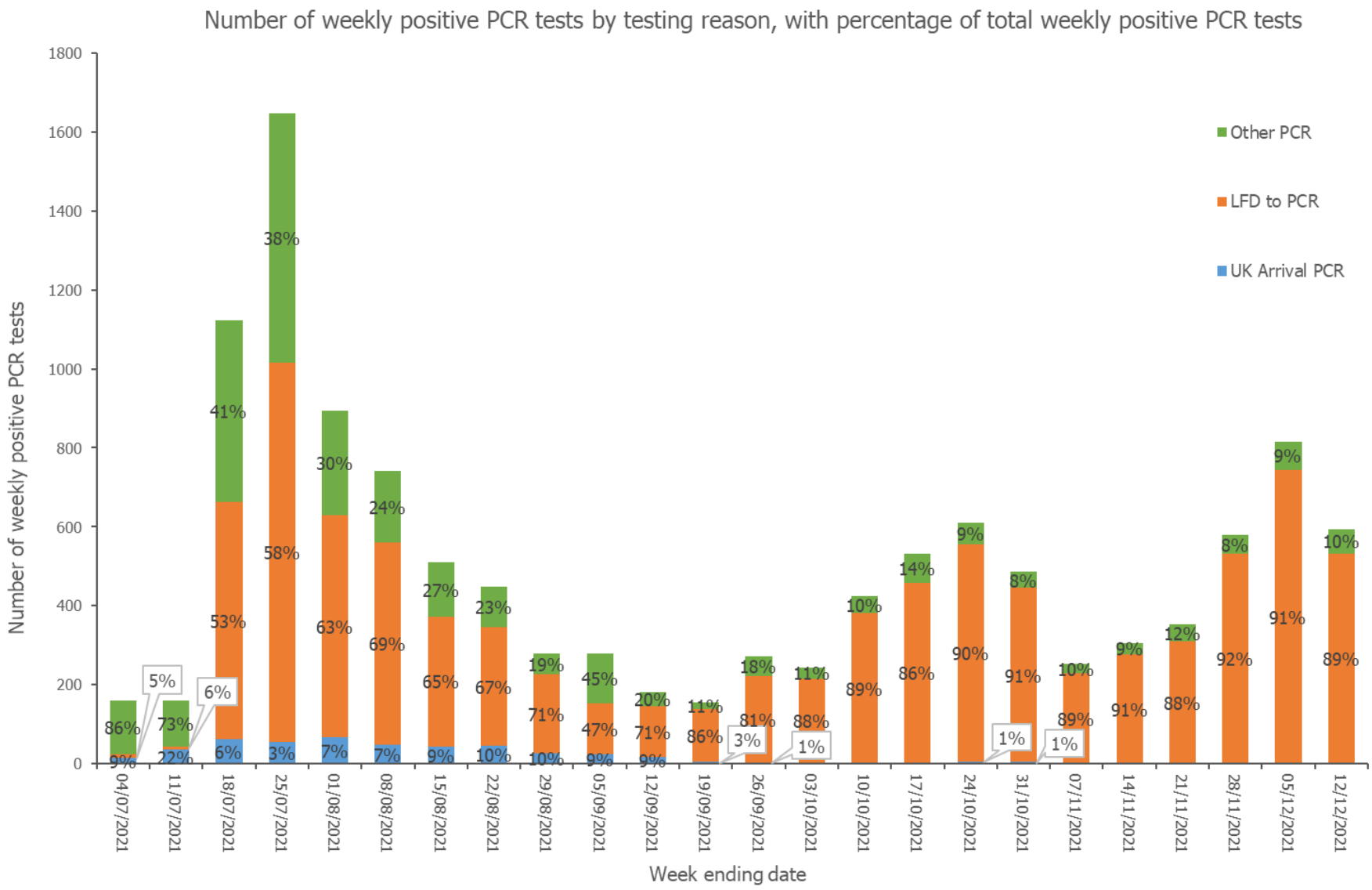


PCR Tests by Pathway



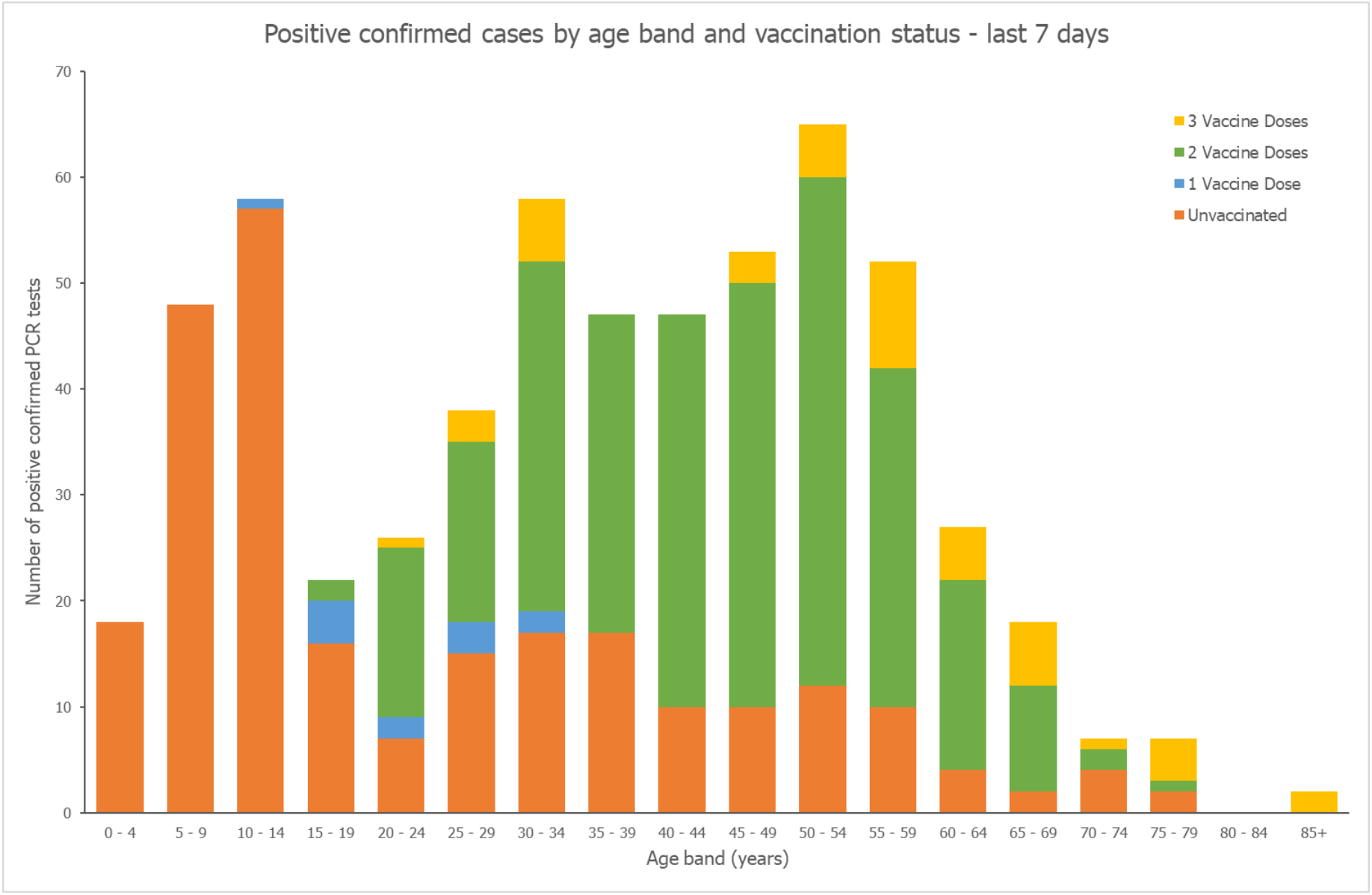
See last page for definitions

Positive PCR Tests by Pathway

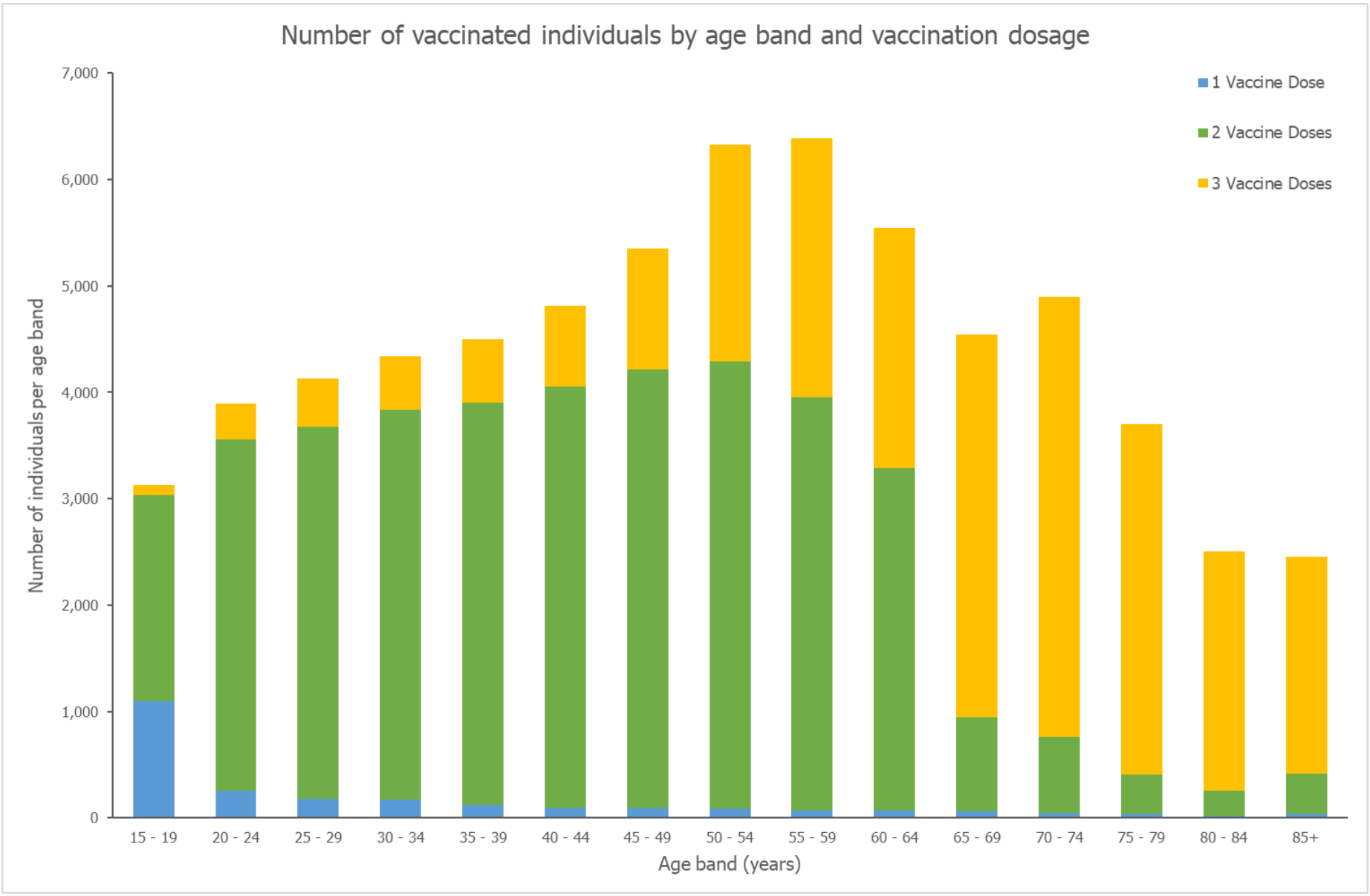


See last page for definitions

Weekly Positive Cases by Age Group



Vaccine Uptake and Coverage



This data will be expanded in future reports to show % of eligible population vaccinated

Hospitalised Patients

This figure is a snapshot census of the cases in Hospital.

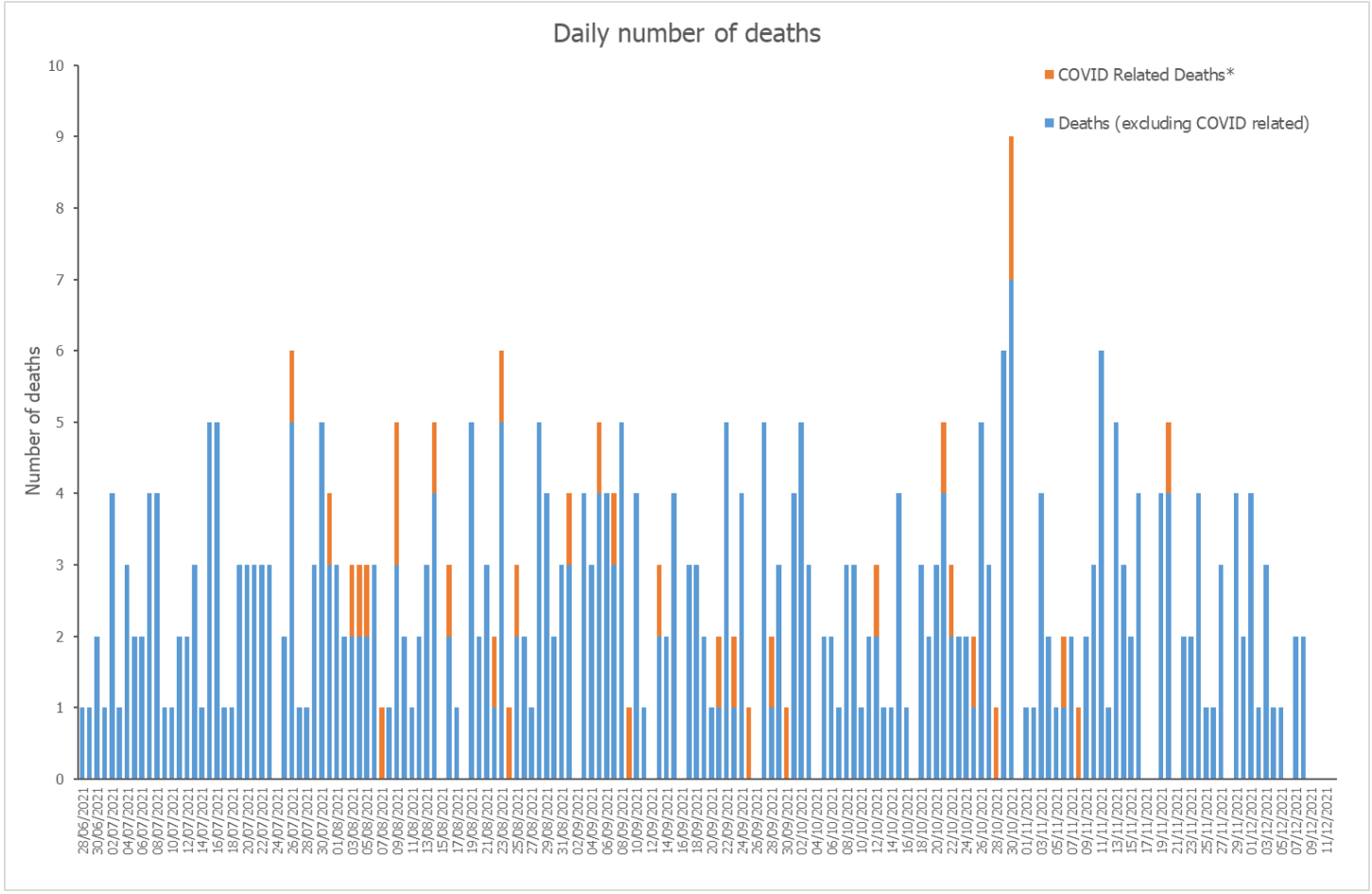
When broken down into vaccination status all numbers are 5 or below. Therefore, further sub-analysis of weekly figures cannot be produced due to the caveats and identifiable nature of small numbers.

SUMMARY

Total Patients	**6**
With COVID-19 Symptoms	100.0%
Without COVID-19 Symptoms	

Vaccination Status of Hospital Admissions	
Fully Vaccinated (2+2)	66.7%
Partially Vaccinated	
Unvaccinated	33.3%

Daily Deaths – Current Wave



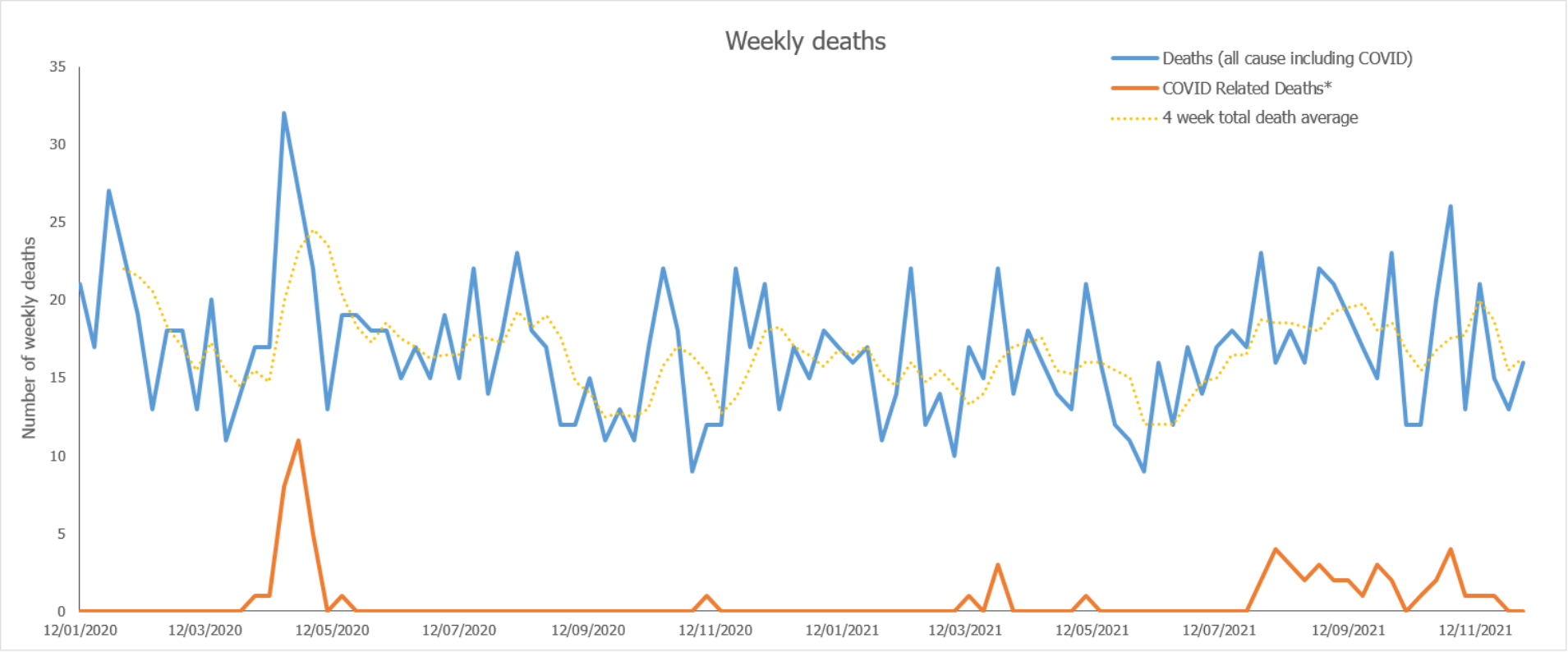
Cumulative COVID Related Deaths = 67

Numbers up to date at time of publication.

Note: Death registrations are often delayed and therefore deaths occurring in a given week may not be input into the week of which death occurred until a later date, meaning figures are likely to change retrospectively as data is updated and the most recent week's numbers will be incomplete.

*COVID deaths are those where COVID-19 is mentioned anywhere within the death certificate

Weekly Deaths – Whole Pandemic

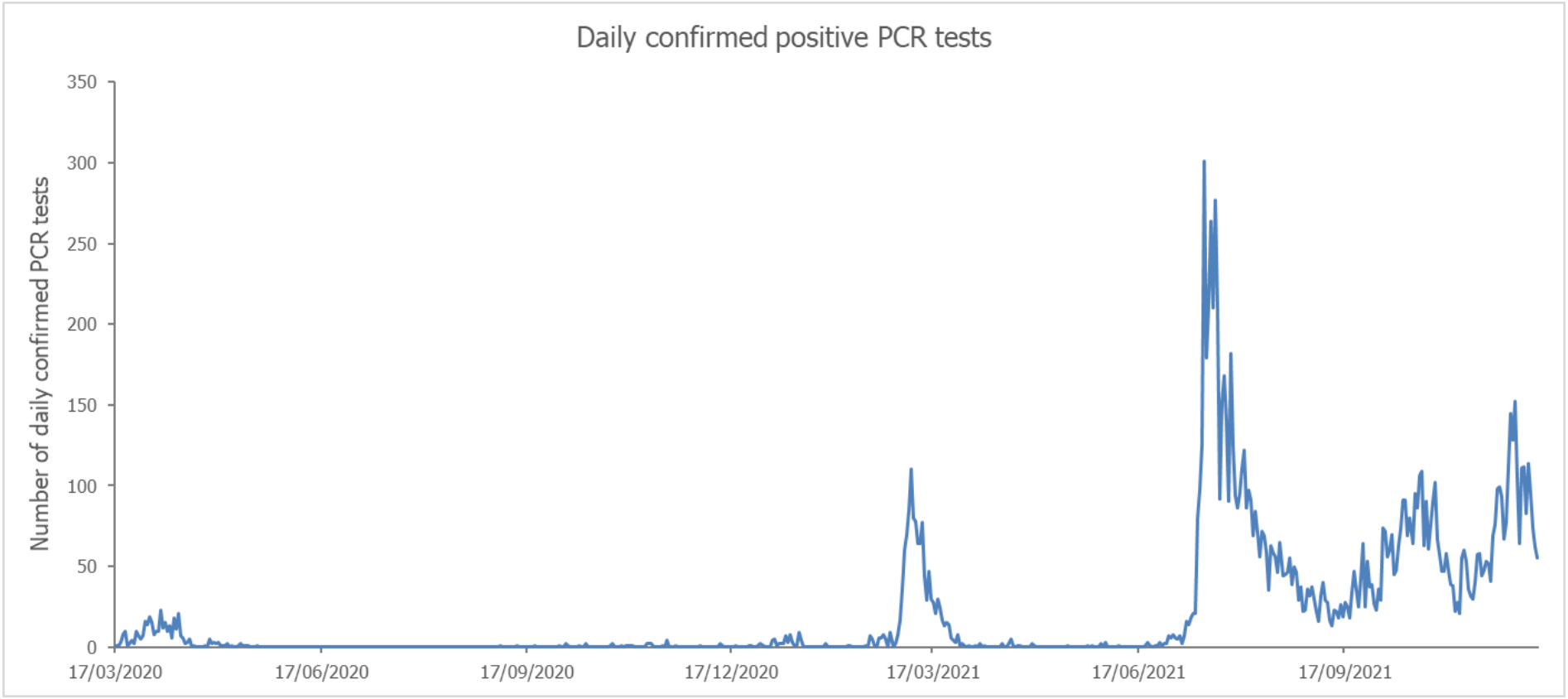


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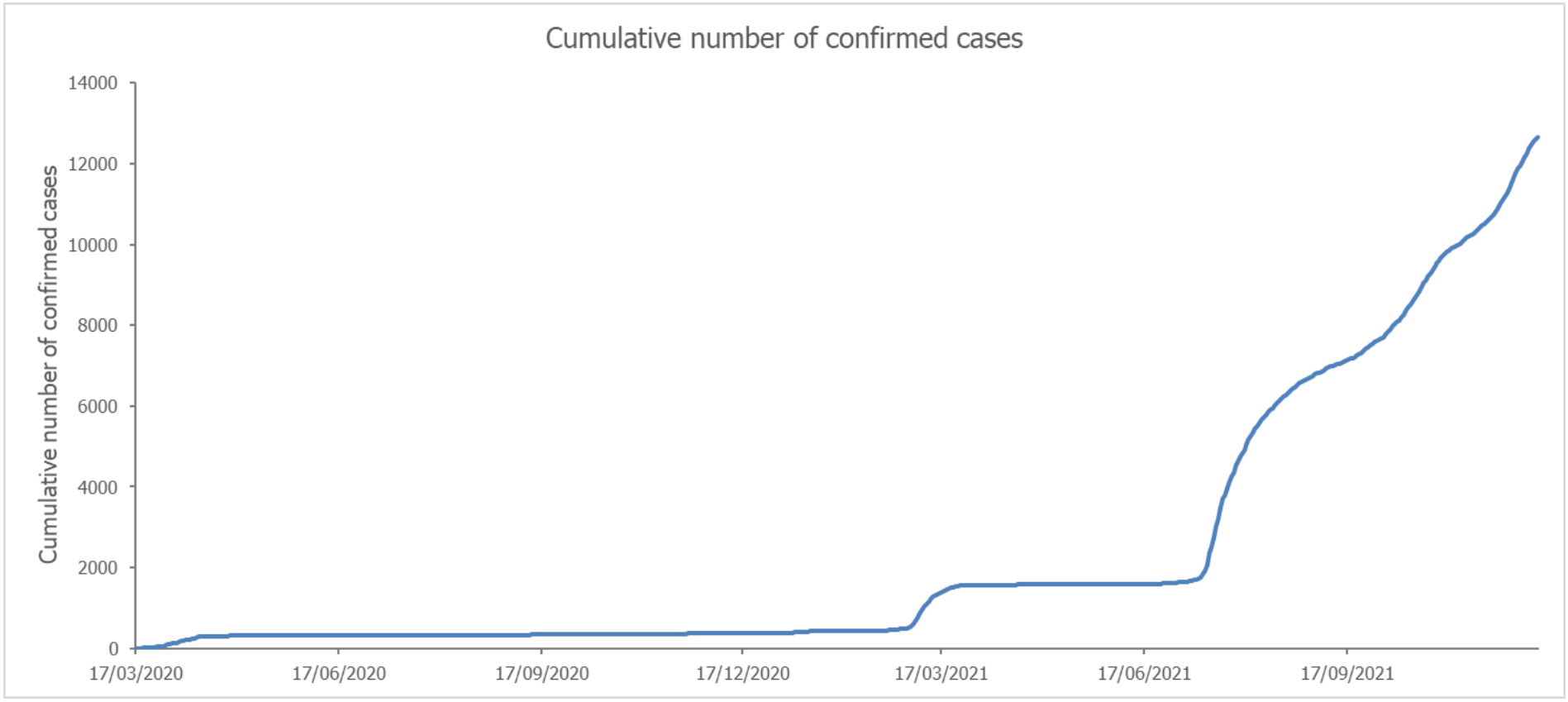
Weekly death data is 11 days behind the Weekly Surveillance Report's release date. This is to allow for death registrations to be received with any delays and stop an incorrect perceived 'sudden drop' in weekly deaths that would occur if an appropriate time period was not given to allow for death registrations to be received in due course.

*COVID deaths are those where COVID-19 is mentioned anywhere within the death certificate. This differs from the definition used by Public Health England, who classify a COVID death as "people who had had a positive test result for COVID-19 and dies within 28 days of the first positive test result."

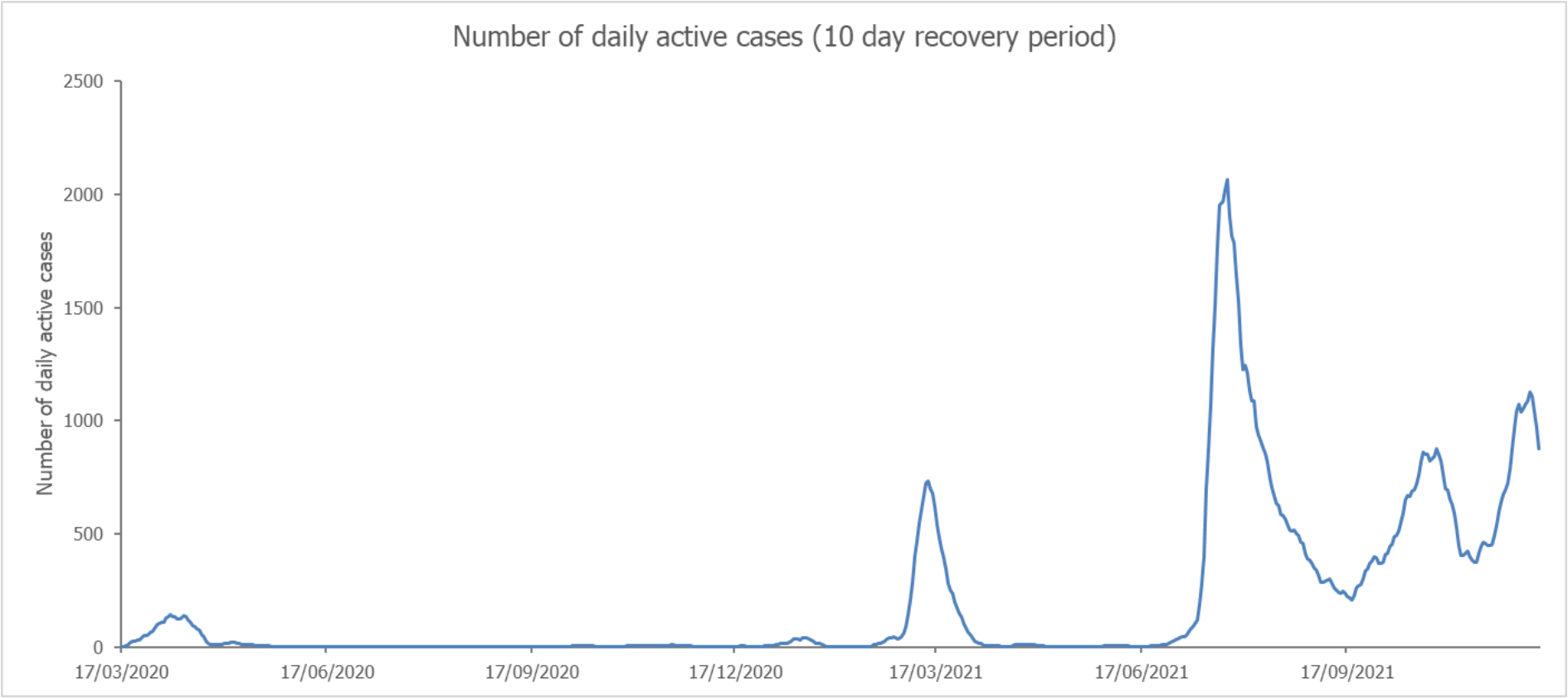
Daily Positive Cases Update – Whole Pandemic



Cumulative Confirmed Cases

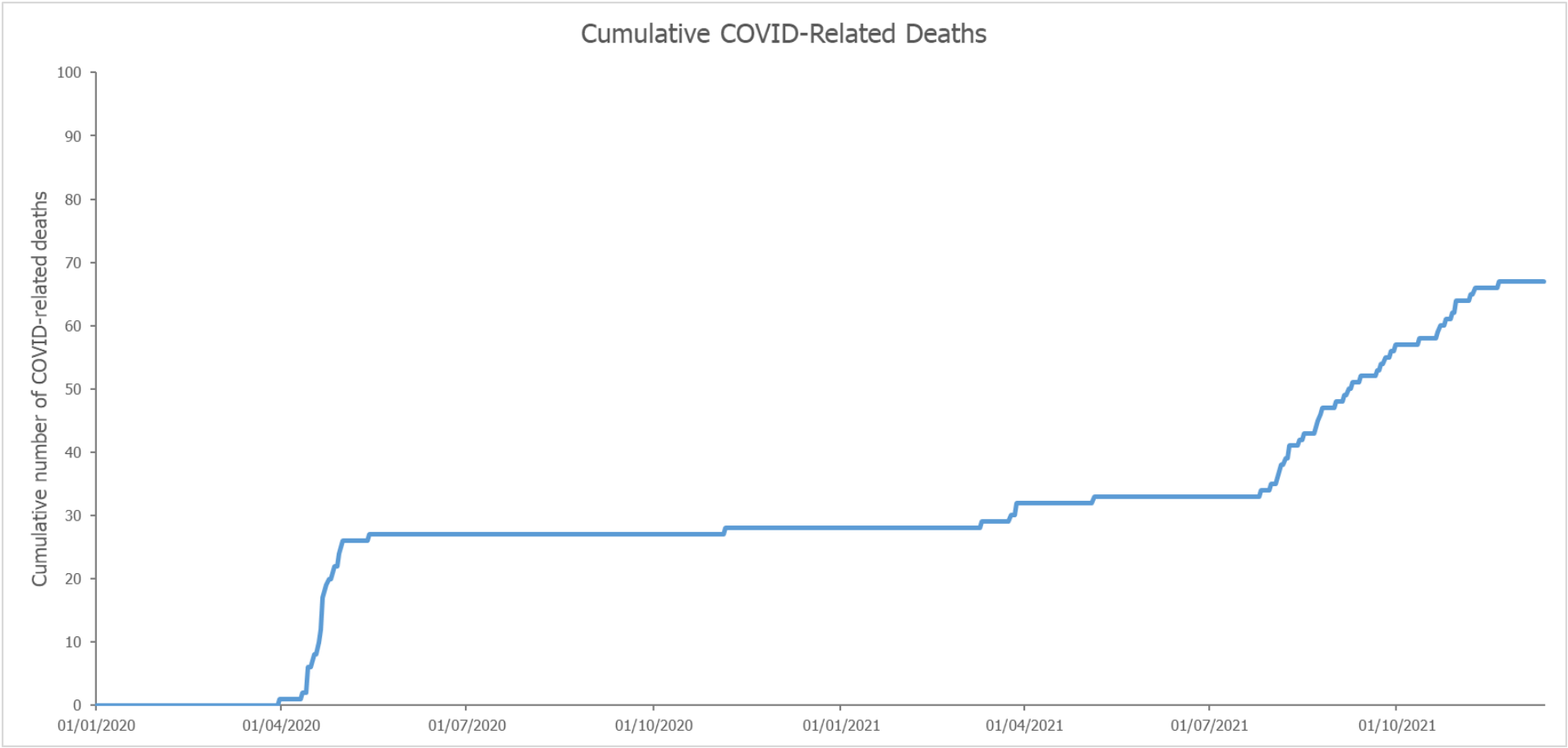


Daily Active Cases (assumed 10 day recovery period)



This data was calculated on 13/12/2021, using the current guidance of an assumed 10 day recovery period.

Cumulative COVID-Related Deaths



Definitions

- **Testing Pathways**
  - Other PCR = hospital, surveillance, symptomatics, other travel
  - LFD to PCR = positive LFD subsequently confirmed by PCR
  - UK Arrivals = identified arrivals from UK requiring PCR testing
- **LFD Pathway**
  - See above LFD to PCR definition
- **Vaccination Status**
  - 2 doses = those who have received two doses
  - 1 dose = those who have received one dose
  - Current available data doesn't allow for confirmation that those who've had 2 doses are fully vaccinated i.e. 2+2

Appendix 1

Date	Daily R_t	Date	Daily R_t	Date	Daily R_t	Date	Daily R_t	Date	Daily R_t	Date	Daily R_t	Date	Daily R_t	Date	Daily R_t	Date	Daily R_t
01-Jul	6.00	20-Jul	11.67	08-Aug	0.67	27-Aug	0.54	15-Sep	1.63	04-Oct	1.76	23-Oct	0.99	11-Nov	0.61	30-Nov	2.74
02-Jul	2.67	21-Jul	13.14	09-Aug	0.73	28-Aug	0.79	16-Sep	0.59	05-Oct	1.14	24-Oct	0.67	12-Nov	0.67	01-Dec	3.12
03-Jul	6.00	22-Jul	9.55	10-Aug	0.64	29-Aug	0.34	17-Sep	0.70	06-Oct	2.24	25-Oct	1.09	13-Nov	0.77	02-Dec	2.19
04-Jul	5.00	23-Jul	1.13	11-Aug	0.76	30-Aug	0.51	18-Sep	0.86	07-Oct	1.13	26-Oct	1.13	14-Nov	1.05	03-Dec	1.38
05-Jul	7.00	24-Jul	1.56	12-Aug	0.63	31-Aug	0.78	19-Sep	0.64	08-Oct	1.89	27-Oct	1.59	15-Nov	2.59	04-Dec	0.65
06-Jul	0.67	25-Jul	1.35	13-Aug	0.48	01-Sep	0.68	20-Sep	2.00	09-Oct	1.15	28-Oct	0.71	16-Nov	2.15	05-Dec	1.11
07-Jul	7.00	26-Jul	0.47	14-Aug	0.40	02-Sep	0.66	21-Sep	3.62	10-Oct	1.85	29-Oct	0.66	17-Nov	2.10	06-Dec	1.20
08-Jul	6.00	27-Jul	0.52	15-Aug	0.65	03-Sep	0.77	22-Sep	1.52	11-Oct	2.74	30-Oct	0.44	18-Nov	0.87	07-Dec	1.24
09-Jul	7.00	28-Jul	0.86	16-Aug	0.63	04-Sep	0.44	23-Sep	1.09	12-Oct	1.97	31-Oct	0.43	19-Nov	0.88	08-Dec	1.48
10-Jul	2.57	29-Jul	0.48	17-Aug	0.81	05-Sep	0.33	24-Sep	2.33	13-Oct	3.03	01-Nov	0.94	20-Nov	1.00	09-Dec	0.86
11-Jul	3.50	30-Jul	0.45	18-Aug	0.56	06-Sep	1.07	25-Sep	2.33	14-Oct	1.23	02-Nov	0.53	21-Nov	1.14	10-Dec	0.51
12-Jul	2.75	31-Jul	0.31	19-Aug	0.92	07-Sep	1.05	26-Sep	1.32	15-Oct	0.96	03-Nov	0.64	22-Nov	2.16	11-Dec	0.48
13-Jul	13.33	01-Aug	0.45	20-Aug	0.80	08-Sep	1.32	27-Sep	1.89	16-Oct	1.43	04-Nov	0.50	23-Nov	2.53	12-Dec	0.36
14-Jul	19.60	02-Aug	1.22	21-Aug	0.64	09-Sep	1.17	28-Sep	1.42	17-Oct	1.07	05-Nov	0.24	24-Nov	2.45		
15-Jul	17.86	03-Aug	0.80	22-Aug	0.66	10-Sep	0.47	29-Sep	2.17	18-Oct	1.36	06-Nov	0.26	25-Nov	1.74		
16-Jul	150.50	04-Aug	0.51	23-Aug	0.93	11-Sep	0.38	30-Sep	0.74	19-Oct	1.91	07-Nov	0.31	26-Nov	1.60		
17-Jul	25.57	05-Aug	0.68	24-Aug	1.08	12-Sep	0.62	01-Oct	0.49	20-Oct	2.21	08-Nov	0.95	27-Nov	1.52		
18-Jul	17.67	06-Aug	0.99	25-Aug	0.78	13-Sep	0.71	02-Oct	1.06	21-Oct	1.73	09-Nov	1.28	28-Nov	1.60		
19-Jul	18.57	07-Aug	0.38	26-Aug	0.80	14-Sep	0.82	03-Oct	1.20	22-Oct	0.86	10-Nov	1.13	29-Nov	2.09		

References

[1] Contreras, S., Villavicencio, H. A., Medina-Ortiz, D., Saavedra, C. P., & Olivera-Nappa, Á. (2020). Real-Time Estimation of R_t for Supporting Public-Health Policies Against COVID-19. *Frontiers in public health*, *8*, 556689. https://doi.org/10.3389/fpubh.2020.556689

Updates